Amendment to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for increasing pressure in a closed-loop system comprising a pump for pumping fluid in said system, a heat-generating component and a heat-rejection component, said method comprising the steps of:

situating a venturi in series in said closed-loop system; and

providing a predetermined pressure at a throat of said venturi;

using said pump to cause flow in said closed-loop system in order to increase pressure in said system, thereby increasing said boiling point of the fluid, said overall pressure being greater than said predetermined pressure;

providing ~~a second~~an accumulator and a valve to cause fluid to be passed to said heat-generating component when said pump is not pumping.

2. (Original) The method as recited in claim 1 wherein said method further comprises the step of:

establishing said predetermined pressure to be atmospheric pressure at said throat.

3. (Original) The method as recited in claim 1 wherein said method further comprises the step of:

situating an expansion tank at said throat.

4. (Original) The method as recited in claim 1 wherein said method further comprises the step of:

providing a switch for controlling the operation of said heat-generating component and causing said component to be turned on or off if a flow in said closed-loop system is above or below a predetermined flow rate.

5. (Original) The method as recited in claim 1 wherein said heat-generating component comprises an X-ray tube.

6. (Original) The method as recited in claim 4 wherein said method comprises the step of:
situating said switch downstream of said venturi.

7. (Original) The method as recited in claim 4 wherein said predetermined pressure of that remains substantially constant as a rate of said flow changes.

8. (Original) The method as recited in claim 7 wherein said predetermined pressure is atmospheric.

9. (Original) The method as recited in claim 7 wherein said method comprises the step of:
situating said switch adjacent either an inlet or outlet of said venturi.

10. (Original) The method as recited in claim 9 wherein said switch is situated upstream of said pump and downstream of said venturi.

11. (Original) The method as recited in claim 1 wherein said valve is a check valve.

12. (Currently Amended) The method as recited in claim 11, wherein check valve is situated between said ~~second~~ accumulator and said pump.

13. (Currently Amended) A cooling system for cooling a component comprising:

a heat-rejection component;

a pump for pumping fluid to said heat-rejection component and said component;

a conduit for communicating fluid among said component, said heat-rejection component and said pump, said conduit comprising a venturi having a predetermined pressure applied at a throat of said venturi~~, an expansion tank~~;

a closed expansion tank coupled to said conduit; and

a valve coupled to said conduit;

said valve and said closed expansion tank cooperating to cause flow in ~~second~~ said conduit to cool the component when said pump is deactivated.

14. (Original) The cooling system as recited in claim 13 wherein said predetermined pressure is atmospheric pressure.

15. (Original) The cooling system as recited in claim 13 wherein said predetermined pressure is provided by a second expansion tank in communication with a throat of said venturi.

16. (Original) The cooling system as recited in claim 15 wherein said second expansion tank comprises a diaphragm having one side in communication with said fluid and an opposite side subject to atmospheric pressure.

17. (Original) The cooling system as recited in claim 13 wherein said system further comprises a switch situated in said conduit for generating a signal used to control operation of said component when a flow rate of said fluid is not at a predetermined flow rate.

18. (Original) The cooling system as recited in claim 17 wherein said switch is a pressure switch measures fluid pressure relative to atmospheric pressure.

19. (Original) The cooling system as recited in claim 17 wherein said switch is located upstream of said pump.

20. (Original) The cooling system as recited in claim 18 wherein said switch is located downstream of said venturi and upstream of said pump.

21. (Original) The cooling system as recited in claim 20 wherein said component comprises an X-ray tube.

22. (Original) The cooling system as recited in claim 14 wherein said system further comprises a switch situated in said conduit for generating a signal used to control operation of said component when a flow rate of said fluid is not at a predetermined flow rate.

23. (Original) The cooling system as recited in claim 22 wherein said switch is located either upstream or downstream of said venturi and upstream of said pump.

24. (Original) The cooling system as recited in claim 23 wherein said component comprises an X-ray tube.

25. (Original) The cooling system as recited in claim 23 wherein said component comprises an internal combustion engine.

26. (Original) The cooling system as recited in claim 23 wherein said component comprises a hydronic boiler.

27. (Original) The method as recited in claim 13 wherein said valve is a check valve.

28. (Currently Amended) The method as recited in claim 27, wherein check valve is situated between said ~~second accumulator~~closed expansion tank and said pump.

29. (Currently Amended) An X-ray system comprising:

an X-ray apparatus for generating X-rays, said X-ray apparatus comprising an X-ray tube situated in an X-ray tube casing; and

a cooling system for cooling said X-ray tube, said cooling system comprising:

a heat-rejection component coupled to said X-ray tube casing;

a pump for pumping fluid to said heat-rejection component and said ~~component~~x-ray tube casing;

a conduit for communicating fluid among said X-ray tube casing, said heat-rejection component and said pump, said conduit comprising a venturi having a predetermined pressure applied at a throat of said venturi, an expansion tank;

a closed expansion tank located between said pump and said heat-rejection component; and

a valve located between said pump and said closed expansion tank.

30. (Original) The X-ray system as recited in claim 29 wherein said predetermined pressure is atmospheric pressure.

31. (Original) The X-ray system as recited in claim 29 wherein said predetermined pressure is provided by a second expansion tank in communication with a throat of said venturi.

32. (Original) The X-ray system as recited in claim 31 wherein said second expansion tank comprises a diaphragm having one side in communication with said fluid and an opposite side subject to atmospheric pressure.

33. (Currently Amended) The X-ray system as recited in claim 29 wherein said system further comprises a switch situated in said conduit for generating a signal used to control operation of said ~~component~~ x-ray tube when a flow of said fluid is not a predetermined flow rate.

34. (Original) The X-ray system as recited in claim 33 wherein said switch is a pressure switch that measures fluid pressure relative to atmospheric pressure.

35. (Original) The X-ray system as recited in claim 33 wherein said switch is located downstream or upstream of said venturi and upstream of said pump.

36. (Currently Amended) The X-ray system as recited in claim 30 wherein said system further comprises a switch situated in said conduit for generating a signal used to control operation of said ~~component~~ x-ray tube when a flow of said fluid is not at a predetermined flow rate.

37. (Original) The X-ray system as recited in claim 36 wherein said switch is located either upstream or downstream of said venturi and upstream of said pump.

38. (Original) The X-ray system as recited in claim 34 wherein said predetermined pressure equals atmospheric pressure.

39. (Original) The X-ray system as recited in claim 33 wherein said predetermined pressure equals atmospheric pressure.

40. (Original) The X-ray system as recited in claim 36 wherein said switch is located downstream of said venturi and upstream of said pump.

41. (Original) The method as recited in claim 29 wherein said valve is a check valve.

42. (Currently Amended) The method as recited in claim 41, wherein check valve is situated between said ~~second accumulator~~closed expansion tank and said pump.

43. – 65 (Cancelled)